

VIA FACSIMILE (703) 872-9306

127003
PATENT

IN THE CLAIMS:

1. (Original) A method for obtaining data, said method comprising:

scanning myocardial tissue of a patient with an Energy Discrimination Computed Tomography (EDCT) system to acquire data; and

analyzing the acquired data for at least one of cardiac measurements, diagnosis, and prognosis after interventions.

2. (Original) A method in accordance with Claim 1, wherein said scanning comprises scanning myocardial tissue to acquire perfusion data, said method further comprising determining at least one of a defect and a tissue viability based upon the acquired perfusion data.

3. (Original) A method in accordance with Claim 2 wherein said scanning comprises generating a time-delayed series of cardiac images for measurement of perfusion levels in at least one part of a myocardium.

4. (Original) A method in accordance with Claim 1 wherein said analyzing comprises analyzing the acquired data to determine a cardiac function.

5. (Currently amended) A method in accordance with Claim 4 wherein said analyzing comprises producing a delineation of a ventricular myocardium from a contrast-filled blood pool, wherein said producing comprises:

separating at least one ventricle from anatomy surrounding the ventricle; and

separating contrast-filled blood in the ventricle from ventricular tissue at at least one of an end diastole and an end systole.

6. (Original) A method in accordance with Claim 1 further comprising separating soft plaque and calcified plaque from a contrast agent in a coronary artery.

VIA FACSIMILE (703) 872-9306

127003
PATENT

7. (Original) A method in accordance with Claim 1 further comprising detecting at least one structural defect in a heart muscle.

8. (Original) A method in accordance with Claim 1 further comprising performing an automated bone segmentation.

9. (Original) A method in accordance with Claim 1 wherein said analyzing comprises performing a Compton and photoelectric decomposition of the acquired data to differentiate abnormal regions of myocardial tissue from normal regions of myocardial tissue and delineate at least one of a contrast agent, a calcified plaque, and a bone from the myocardial tissue.

10. (Original) A method in accordance with Claim 1 wherein said analyzing comprises performing a Basis Material Decomposition (BMD) of the acquired data to differentiate abnormal regions of myocardial tissue from normal regions of myocardial tissue and delineate at least one of a contrast agent, a calcified plaque, and a bone from the myocardial tissue.

11. (Previously presented) An Energy Discrimination Computed Tomography (EDCT) System comprising:

a radiation source;

a radiation detector; and

a computer coupled to said radiation source and said radiation detector, said computer configured to:

acquire data regarding a first energy spectrum of a scan of myocardial tissue of a patient;

acquire data regarding a second energy spectrum of the scan and

VIA FACSIMILE (703) 872-9306

127003
PATENT

analyze the acquired data for at least one of cardiac measurements, diagnosis and prognosis after interventions.

12. (Original) A system in accordance with Claim 11, wherein said computer further configured to acquire myocardial perfusion data to determine at least one of a defect and a tissue viability based upon the acquired perfusion data.

13. (Original) A system in accordance with Claim 12 wherein said computer further configured to generate a time-delayed series of cardiac images for measurement of perfusion levels in at least one part of a myocardium.

14. (Original) A system in accordance with Claim 11 wherein said computer further configured to determine a cardiac function based upon the acquired data.

15. (Currently amended) A system in accordance with Claim 14 wherein said computer further configured to produce a delineation of a ventricular myocardium from a contrast-filled blood pool in the ventricle, wherein to produce a delineation, said computer is configured to separate at least one ventricle from anatomy surrounding the ventricle and separate contrast-filled blood in the ventricle from ventricular tissue at at least one of an end diastole and an end systole.

16. (Original) A system in accordance with Claim 11 wherein said computer further configured to separate soft plaque and calcified plaque from a contrast agent in a coronary artery.

17. (Original) A system in accordance with Claim 11 wherein said computer further configured to detect at least one structural defect in a heart muscle.

18. (Original) A system in accordance with Claim 11 wherein said computer further configured to perform an automated bone segmentation.

VIA FACSIMILE (703) 872-9306

127003
PATENT

19. (Original) A computer readable medium encoded with a program configured to instruct a computer to:

receive data regarding a first energy spectrum of a scan of myocardial tissue of the patient;

receive data regarding a second energy spectrum of the scan and

analyze the acquired data for at least one of cardiac measurements, diagnosis and prognosis after interventions.

20. (Currently amended) A computer readable medium in accordance with Claim 19 wherein said program further configured to instruct the computer to:

delineate a ventricular myocardium from a contrast-filled blood pool by:

separate separating at least one ventricle from anatomy surrounding the ventricle; and

separate separating contrast-filled blood in the ventricle from ventricular tissue at at least one of an end diastole and an end systole.

VIA FACSIMILE (703) 872-9306**127003
PATENT****WITHDRAWAL OF 37 C.F.R. 1.97(e) CERTIFICATION**

An IDS was electronically filed on February 12, 2004, in which a certification was made under 37 C.F.R. 1.97(e) (within three months of being cited in a foreign search report or within three months of an item being known). The undersigned meant to submit the IDS under 37 C.F.R. 1.97(b) (prior to a first Office Action on the merits), and therefore withdraws the previous 37 C.F.R. 1.97(e) certification. This withdrawal is being made at this time because the error was not discovered until receipt of the notice of allowance. This error was a clerical error, was made without deceptive intent, and has no consequence with respect to any fees or consideration of the IDS because the IDS was timely filed prior to any Office Action on the merits.